

Amendment and Response

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Derek David SMITH et al.

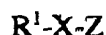
Serial No.: 09/813,345

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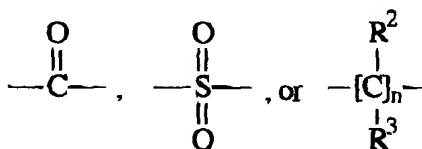
Filed: 20 March 2001

For: PEPTIDE ANTAGONISTS OF CGRP-RECEPTOR SUPERFAMILY AND  
METHODS OF USE

- 1 29. (AMENDED) A method for inhibiting CGRP binding to one or more CGRP receptors comprising contacting a CGRP receptor with a composition comprising a peptide having the general formula:



wherein Z is a CGRP receptor-binding peptide,  $R^1$  is an organic group, X is



and wherein  $R^2$  and  $R^3$  are independently H or an organic group and n is a whole integer between 1 and 10;

in an amount effective to inhibit CGRP binding to one or more CGRP receptors.

- 10 32. (AMENDED) The method of Claim 29 wherein Z is an antagonist of human CGRP.

- D2 11 33. (AMENDED) The method of Claim 29 wherein Z is an antagonist of  $\alpha$ -CGRP or  $\beta$ -CGRP.

- 24 45. (AMENDED) The method of Claim 37 wherein  $R^1$  is



D3

and wherein Y is selected from the group consisting of O, NH, and S.

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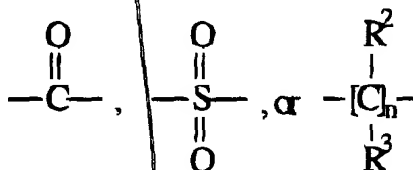
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- D3 23 46. (AMENDED) The method of Claim 21 43 wherein the peptide is a CGRP antagonist having at least 15 consecutive amino acids selected from a protein from the group consisting of N- $\alpha$ -benzoyl- $\alpha$ -CGRP, N- $\alpha$ -benzyl- $\beta$ -CGRP, N- $\alpha$ -benzoyl- $\beta$ -CGRP and N- $\alpha$ -benzyl- $\alpha$ -CGRP, dibenzyl-h- $\alpha$ -CGRP and dibenzyl-h- $\beta$ -CGRP.

48. (AMENDED) An assay for identifying CGRP antagonists comprising:  
combining a peptide having the general formula:



wherein Z is a CGRP receptor-binding peptide,  $R^1$  is an organic group, X is



and wherein  $R^2$  and  $R^3$  are independently H or an organic group and n is a whole integer between 1 and 10, with at least one CGRP receptor and a test CGRP antagonist with at least one CGRP receptor; and

comparing binding of the peptide to the CGRP receptor with binding of the test antagonist to the CGRP receptor, wherein improved binding of the test antagonist to the CGRP receptor in the presence of the peptide identifies a candidate CGRP antagonist.

50. (AMENDED) The assay of claim 48 wherein Z is an antagonist of human CGRP.

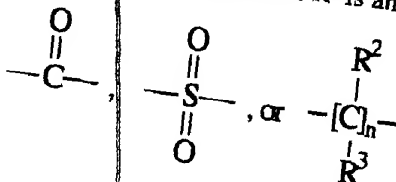
- D5 51. (AMENDED) A method for identifying a CGRP receptor in a cell sample comprising:  
contacting a peptide having the general formula:



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wherein Z is a CGRP receptor binding peptide, R<sup>1</sup> is an organic group, X is



and wherein R<sup>2</sup> and R<sup>3</sup> are independently H or an organic group and n is a whole integer between 1 and 10, with a cell sample to detect binding of the peptide to the cell; and isolating one or more receptors binding the peptide to the cell.

D6

53. (AMENDED) The assay of claim 51 wherein Z is an antagonist of human CGRP.

26-54

(NEW) The method of claim 29 wherein Z is a vasoactive peptide.

D7

27-55

(NEW) The method of claim 26 wherein Z is an antagonist of human CGRP.